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Submission on Input Methodologies (IM) draft decisions papers (including the Report on the IM review)

This letter contains Meridian's submissions in respect of the following:

- Input methodologies review draft decisions – Topic paper 1 – Form of control and RAB indexation for EDBs, GPBs and Transpower
- Input methodologies review draft decisions – Topic paper 3 – The future impact of emerging technologies in the energy sector
- Input methodologies review draft decisions – Topic paper 4 – Cost of capital issues

Topic paper 1 – Form of control and RAB indexation for EDBs, GPBs and Transpower

In this section Meridian responds to the Commission's paper by commenting on the specific questions asked by the Electricity Authority in its 30 May 2016 letter published with the IM draft decisions papers and headed "Possible implications for efficient distribution pricing of a decision to change the form of control for electricity distribution businesses."

- i. To what extent would a revenue cap affect the incentives on EDBs to change to more efficient pricing structures, compared to a WAPC*

Meridian shares the concern of the EA that a revenue cap will weaken incentives on EDBs to adopt efficient price structures. In particular it seems that with a move to a revenue cap EDBs will be insulated from revenue loss – this could encourage them to continue to rely on consumption-based pricing¹ or indeed to move to other, more inefficient, pricing structures.

The Commission's paper does not, it seems to us, respond adequately to this concern. The Commission cites concerns with revenue loss as a potential

¹ That is, maintain traditional variable \$/kWh-dominated pricing structures.

disincentive to more efficient pricing under the current WAPC (para 74) however the mechanism by which adopting new, more efficient, pricing structures under a WAPC might result in revenue loss is not made clear.

Certainly, adopting a revenue cap and thus insulating EDBs against any risk of revenue loss will mean that EDBs can no longer explain failures to adopt more efficient pricing on the basis of this claimed disincentive. However it is not clear what actual positive incentive or motive they would then have to adopt efficient pricing once they are no longer at risk of losing revenue from persisting with inefficient pricing structures.

The Commission seems to place some reliance on “publically available reviews of EDB pricing practices [that] have scored pricing methodologies against efficient pricing principles, and highlighted examples of particularly good practice” (para 79) as a potential positive incentive. Meridian does not agree that such reviews will provide sufficient motivation to EDBs. It is also not clear to Meridian what “...other factors might assist in positively promoting more efficient pricing...” once a WAPC is abandoned.

It is possible that EDBs have failed to date to adopt efficient pricing structures because they see the (slight) revenue risks of moving to such structures as being more significant than the (even more slight) revenue risks of persisting with current inefficient pricing structures. However, as emerging technologies reduce in cost and gain greater traction it may be that EDBs who remained under a WAPC would change this view and start to see the relative revenue risks reversed. This would in turn incentivise them to adopt more efficient pricing structures.

- ii. *What is the likelihood that EDBs under a revenue cap would set inefficiently high prices for certain services or customers?
Have any EDBs operating under a revenue cap been observed engaging in this pricing behaviour?*

Meridian agrees with the EA, for the reasons set out in the EA’s letter, that there is also a risk that EDBs operating under a revenue cap would set inefficiently high prices for certain services or customers.

- iii. *To what extent has the limited penetration of smart meters in the past acted as a barrier to the introduction of efficient distribution pricing?*

Meridian agrees with the EA that the increasing penetration of smart meters better enables the introduction of efficient distribution pricing and that conversely the limited penetration of such meters, until relatively recently, may have hindered the introduction of such pricing. In particular it is more difficult to construct and accurately implement a range of potentially more efficient tariffs (maximum demand, TOU) without smart meters.

- iv. *To what extent have the LFC Regulations acted as a barrier to the introduction of efficient distribution pricing in the past (given the prevailing interpretation of the Regulations)?*

Meridian considers that the LFC Regulations and the perceived risk of breach of the LFC Regulations if more efficient pricing structures were adopted has been a significant barrier to the introduction of efficient distribution pricing. Even now Meridian notes the industry is still awaiting guidance notes from the EA on its view as to the proper interpretation of the LFC Regulations and that in Meridian's submission to the EA's recent distribution pricing review, we questioned the EA's view that capacity charges were permitted under the LFC Regulations. The release of definitive guidance from the EA and / or reform of the LFC Regulations will be a key enabler to the adoption of more efficient pricing structures by distributors.

- v. *To what extent does the prospect of emerging technologies influence EDBs' incentives to change their pricing decisions? How is this influence developing over time?*

Meridian agrees with the EA that growth in uptake of emerging technologies should increasingly incentivise EDBs to adopt more efficient pricing structures. A recent report by Concept Consulting² suggests we may be on the cusp of a significant expansion in the uptake of emerging technologies and that such expansion is partly driven by current inefficient pricing structures (including inefficient distribution pricing):

² June 2016: *New Technologies Study - Part 2: Economic impacts*, available at <http://www.concept.co.nz/publications.html>. See in particular pages ii and iii.

...under existing electricity tariff structures, PVs are likely to become increasingly attractive as panel prices decline further.

For society as a whole, current arrangements generally create signals to install solar PV that are stronger than justified by solar PV's true benefits. In particular, existing electricity tariff structures typically make prices too high during summer and during the day, and not high enough in winter and in the evenings, when the costs of generation and electricity lines are at their highest.

This is likely to encourage sub-optimal decisions, such as installing solar PV in situations where it is not truly cost-effective, and/or discouraging the orientation of solar PV panels to capture winter energy which is more valuable. We estimate these misaligned signals could result in additional costs of approximately \$1.8bn over the next 20 years (even allowing for the ongoing cost reductions projected for solar PV panels).

Our analysis of batteries shows that they are unlikely to save consumers money based on existing prices. But battery prices are coming down, and they are expected to become attractive in some situations over time.

From the wider perspective of society, batteries offer the prospect of material benefits from avoiding the cost of providing generation and network capacity to meet brief periods of critical peak demand. This benefit is likely to be maximised if they are used to reduce network peaks. It is difficult to quantify this benefit, but it could run into the hundreds of millions of dollars or more.

However, current electricity tariff structures typically provide poor signals around the true costs of meeting peak demand, making it difficult to capture these benefits. Further, household batteries may not be the best energy storage option. Batteries in consumers' electric vehicles, using the 'vehicle-to-grid' injection technologies that are emerging with new EVs, may be a better option in the future.

Concept estimate, based on their modelling, that solar PV is currently cost effective for less than 1% of households but that if current inefficient electricity tariffs persist, it may in 10 years be cost effective for up to 40% of households and in 20 years for 100% of households.³ To be clear, this is not to say that these households will disconnect entirely from the grid. In Meridian's view,

³ See in particular pages 34 – 35 of Concept's report.

even assuming significant reductions in costs of solar and battery technology, it is extremely unlikely that there will be any significant level of grid disconnection in the foreseeable future. The point here is that the cost of solar PV is reducing to the level where, assuming current tariff structures remain, it will be an increasingly viable proposition for consumers. This means distributors who to date may have faced little pressure to change volume-based pricing structures should come under increasing pressure to do so.

Related to this last point, Meridian does not support the Commission's proposal to allow accelerated depreciation. As we have said, we do not believe EDBs face any real risk of economic stranding in the foreseeable future and therefore do not support a proposal which will raise costs to consumers in order to address this non real risk. We note that the Commission itself does not seem to consider that there is solid evidence of any risk to EDBs of partial capital recovery. To the extent that the Commission disagrees with this submission and proceeds to allow accelerated depreciation Meridian submits that there should be a reduction in WACC accordingly

- vi. *Could the WAPC be administered in such a way as to reduce barriers to changing price structures resulting from compliance requirements (eg, considering rules around use of lagged volumes / allowing EDBs to take customer response into account)?*

Are there any other impediments to the introduction of more efficient pricing under a WAPC? How could these impediments be addressed?

Meridian is confident that the WAPC could be administered in such a way as to reduce the barriers identified. There are likely to be a range of means of doing this. Meridian is not aware of any other impediments to the introduction of more efficient pricing.

- vii. *To what extent could EDBs reduce the quantity forecasting risk they are exposed to through their choice of pricing structure?*

Meridian agrees with the EA that businesses in competitive markets adequately cope with risks that are very similar in nature to quantity forecasting risk. There is no reason why EDBs should not be able to cope similarly. We also agree that EDBs can reduce the risks they face in this area by moving to more efficient pricing structures that are less dependent on volumes of energy sold (eg, capacity pricing).

- viii. *What is the likelihood that bearing quantity forecasting risk could provide EDBs with incentives to price more efficiently?*

Meridian considers that increasing penetration of emerging technologies should provide EDBs with incentives to make their pricing structures more efficient if the WAPC were to continue. These incentives are absent under a revenue cap. We also consider that the potential benefits of more efficient distribution pricing could outweigh the potential costs of having EDBs bear quantity forecasting risk.

Finally Meridian submits that if the Commission proceeds to move from a WAPC to a revenue cap then WACC should be revisited to reflect the reduced risk faced by EDBs.

Topic paper 3 – The future impact of emerging technologies in the energy sector

Meridian has reviewed a draft of the submission made by the Electricity Retailers Association of New Zealand (ERANZ) on this topic paper. Meridian is a member of ERANZ, shares the concerns expressed by ERANZ in respect of the Commerce Commission's approach, and supports the ERANZ submission.

Meridian also shares the concerns expressed by the EA in its 1 June 2016 letter published with the IM draft decisions papers and headed "Implications of regulatory treatment of cash flows for emerging technology." In particular, for the reasons identified in the ERANZ submission and supporting material, Meridian considers that there are risks that the cost allocation proposals for EDBs raise similar concerns to those identified in relation to the Transpower demand response programme i.e. EDBs can recover the costs of speculative investments in emerging technologies from consumers who are compelled by regulation to cover the costs of those investments. This makes it difficult for purely competitive participants in markets for emerging technologies to compete with EDBs. In the long run this may mean those commercial or competitive participants are crowded out by the regulated businesses operated by EDBs thus reducing competition and innovation in those markets.

As a final point, at paragraph 48.1 of its paper the Commission states "...we regulate services, not assets or technologies. In the case of electricity, we regulate electricity lines services as defined by Parliament....As a result, we are technology agnostic in the way we regulate electricity lines services, but recognise that new technologies may change the way in which suppliers deliver electricity lines services." In this statement the Commission

does not acknowledge the possibility that, in choosing to regulate electricity lines services Parliament anticipated that the only way such services would ever be provided was by traditional poles and wires networks, replication of which was not economically feasible. As such to allow for “electricity lines services” to be provided by batteries or, as the Commission seems to contemplate in its Emerging technologies pre-workshop paper, by electric vehicles,⁴ may be better seen not as “technology agnosticism” but as a failure to recognise the point at which the regulated provider has ceased to provide the regulated service contemplated by Parliament and is now providing something else instead.

Topic paper 4 – Cost of capital issues

Meridian has reviewed a draft of the submissions made by Contact Energy on the cost of capital paper. Meridian agrees with the submissions made by Contact Energy for the reasons they give.

Please contact either of us if you have any questions relating to this submission.

Yours sincerely



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⁴ Emerging technologies pre-workshop paper – table between paras 72 and 73.